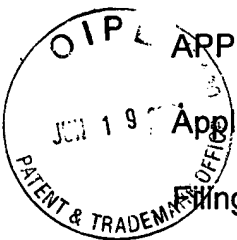


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

# 408  
8/27/01



APPLICANT: MATEY, JESUS )  
)  
Application No.: 09/871,448 )  
)  
Filing Date: 05/31/01 )  
)  
For: TELEVISION SYSTEM )  
)  
)  
Art Unit: UNKNOWN )

TRANSMITTAL OF PRIORITY DOCUMENT

Director for Patents  
Washington, D.C. 20231


Dear Sir:

Enclosed herewith is a certified copy of British Patent Application No. 0013045.0  
for which the above-identified patent application claims priority from.

If, for any reason, this priority document is not acceptable, please inform the  
undersigned as soon as possible.

Respectfully Submitted

HEAD, JOHNSON & KACHIGIAN

  
Mark G. Kachigian, Reg. No. 32,840  
228 West 17th Place  
Tulsa, Oklahoma 74119  
(918) 584-4187

Date: 06/19/01

Customer No. 24,118

Attorneys for Applicant

"EXPRESS MAIL" Mailing Label No. EL779651185US

Date of Deposit: June 19, 2001

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Director for Patents and Trademarks, Washington D.C. 20231 by Barbara Ladd.





INVESTOR IN PEOPLE



The Patent Office  
Concept House  
Cardiff Road  
Newport  
South Wales  
NP10 8QQ

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.

**CERTIFIED COPY OF  
PRIORITY DOCUMENT**

Signed

Dated

**31 MAY 2001**

**BEST AVAILABLE COPY**

# Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

THE PATENT OFFICE  
D  
31 MAY 2000  
NEWPORT

The Patent Office

Cardiff Road  
Newport  
Gwent NP9 1RH

1.	Your reference	AT/MK/G29918		
2.	Patent application number (The Patent Office will fill in this part)	31 MAY 2000	31MAY00 E540803-3 D00346 P01/7700 0.00-0013045.0	
3.	Full name, address and postcode of the or of each applicant (underline all surnames)	Pace Micro Technology Plc Victoria Road Saltaire Shipley BD18 3LF England		
	Patents ADP number (if you know it)	0013045.0		
	If the applicant is a corporate body, give the country/state of its incorporation	7588569001		
4.	Title of the invention	Television System		
5.	Name of your agent (if you have one)	Bailey Walsh & Co.		
	"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)	5, York Place Leeds LS1 2SD		
	Patents ADP number (if you know it)	224001		
6.	If you are declaring priority from one or more earlier patent applications, give the and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number	Country	Priority application number (if you know it)	Date of filing (day / month / years)
7.	If this application is divided or otherwise derived from an earlier UK application, the earlier application	Number of earlier application	Date of filing (day / month / years)	
8.	Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer "Yes" if:			
	a) any applicant named in part 3 is not an inventor, or b) there is an inventor who is not named as an applicant, or c) any named applicant is a corporate body See note (d)			
	Yes			

**Patents Form 1/77**

Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document.

Continuation sheets of this form

Description

7

Claim(s)

Abstract

Drawing(s)

1

*2*

*21*

10. If you are also filing any of the following, state how many of each item.

Priority Documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (*Patents Form 7/77*)

Request for preliminary examination and search (*Patents Form 9/77*)

Request for substantive examination (*Patents Form 10/77*)

Any other documents  
(*Please specify*)

11. I/We request the grant of a patent on the basis of this application

Signature

*Barley Watson*

Date

30th May 2000

12. Name and daytime telephone number of person to contact in the United Kingdom

A TOMKINSON  
0113 2433824

**Warning**

*After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.*

**Notes**

- a) *If you need help filling in this form or you have any questions, please contact the Patent Office on 0645 500505.*
- b) *Write your answers in capital letters using black ink or you may type them.*
- c) *If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.*
- d) *If you have answered 'Yes' Patents Form 7/77 will need to be filed.*
- e) *Once you have filled in this form you must remember to sign and date it.*
- f) *For details of the fee and ways to pay, please contact the Patent Office.*

## Television System

This invention relates to a television system.

A television system hereinafter described includes a broadcaster for transmitting digital data via terrestrial, cable or digital means, which is received by a broadcast data receiver (called a set top box). A result of the digital data is a large number of channels and programs available for selection by a user. Conventional listing means for this large number of channels and programs are inadequate and this has resulted in the development of Electronic Programme Guides (EPG).

Electronic Programme guides (EPG) for use with television systems are conventionally provided in a single broadcaster determined display format. This single display format may not be easily viewable by all users of the television system. For example, a user suffering from colour blindness may be unable to distinguish between coloured buttons, the selection of which operate different functions of the EPG. A user may not be able to distinguish the text of the EPG from the background display due to the colour of the same. In addition, the size of the text font may be too small for a user to read or too large for sufficient information to be displayed on the screen at any particular time. These problems are obviously undesirable.

It is therefore an object of the present invention to overcome the abovementioned problems and allow the user of the EPG to at least partially determine the display format of the EPG.

According to a first aspect of the present invention there is provided a television system including at least a display screen and a broadcast data receiver for generation of audio/video and auxiliary

data, said television system incorporating an EPG for display on said display screen and wherein said EPG can be displayed on the screen in a number of pre-determined formats and said pre-determined formats are selectable by the user of the system using control means.

According to a second aspect of the present invention there is provided a television system including at least a display screen and remote control having a plurality of keys for the selection of a plurality of television channels, said television system incorporating an EPG for display on said display screen and wherein said EPG can be displayed on the screen in a number of pre-determined formats and said pre-determined formats are selectable using the remote control.

Preferably the pre-determined formats can be displayed on the screen to enable a user to select a required format.

Further preferably the different formats are held in the memory in the receiver. The different formats are typically sent from the broadcaster initially and the formats may be updated or changed at intervals.

In one embodiment the selected EPG format is maintained until a new format is selected, even after the receiver is switched off and on.

In an alternative embodiment the EPG reverts to a default format when the receiver has been switched off and then on. A favourite format option can be provided in a drop down menu and saved in the receiver, such that if a default format is displayed on the screen or another user has altered the format, the user can quickly select

their favourite format without having to decide on which format to choose.

Preferably a preview option is provided in the EPG to enable the user to view the format they have chosen.

Preferably the pre-determined formats include display of the EPG on the display screen in different sizes and/or arrangements, different languages, different font sizes, different coloured text, different coloured backgrounds, different shaped operation keys and/or the like.

In a preferred embodiment of the invention, operational keys on the remote control, on the television system and/or on the EPG are provided in specific shapes such that pre-defined operations are initiated by selecting a specific shaped key. This embodiment is useful for user's suffering from colour blindness, who are unable to distinguish different colours and therefore unable to distinguish conventional coloured operational keys.

The above embodiment is also useful for people who have poor eyesight or who are operating the remote control in a dark room and are unable to distinguish different colours easily but are more able to distinguish different shapes by feeling the keys with their fingers.

Preferably the shaped operational keys are also provided in pre-determined colours such that pre-defined operations are initiated by selecting a specific shaped and coloured keys. The combination of shaped and coloured keys provides the user with two means of distinguishing an operational key.

In one embodiment the display format of the EPG can be defined by the user. The television system can include one or more control

buttons which allows a user to define certain parameters of the EPG.

Embodiments of the present invention will now be described with reference to the accompanying figures wherein:

Figures 1A-1C illustrate a number of possible formats of the EPG.

Referring to figures 1A-1C, there is illustrated a number of possible formats of an EPG for use with a television system. The television system includes a display screen 2 for the display of the EPG. The user is able to select one of a number of pre-defined EPG formats using an option/control key on a remote control or an option/control key on the television system, video, DVD and/ or the like.

A summary menu showing the possible pre-defined EPG formats can be displayed on the display screen 2 to enable the user to select a suitable format.

It is possible that only one alternative EPG pre-defined format is provided on the television system and a switch can be provided to switch the EPG between the two different formats according to user preference.

Figure 1A shows a possible pre-defined EPG format which can be selected by a user. The EPG is divided into four sections 4, 6, 8 and 10, each section relating to a particular television channel. A number of option buttons 12 are provided at the top of the EPG display which can be selected by a user to undertake certain functional operations of the EPG.



Figure 1B shows a further possible pre-defined EPG format for selection by a user. The text of the EPG is displayed in a grid 14, which substantially fills the screen, and channel and program information is provided in the boxes defined by the grid. Coloured option buttons 16 are provided to enable a user to undertake certain functional operations of the EPG.

Figure 1C shows a yet further possible pre-defined EPG format for selection by a user. The EPG is divided into two sections 18 and 20, each section relating to a particular television channel. A number of shaped option buttons 22 are provided, which can be selected by a user to undertake certain functional operations of the EPG. The option buttons are shaped such that a user who may be colour blind, or who finds it difficult to distinguish colour, can distinguish the function of each option button via the shape of the same.

It will be appreciated by persons skilled in the art that any number of pre-defined EPG formats can be provided for user-selection. For example, the user may be able to select a pre-defined format having different sized fonts, different coloured font, different coloured background and/or the like. In addition, the arrangement of the text of the EPG may be different. For example, the text could be arranged such that information relating to all available channels is shown simultaneously. Alternatively, the information for one or only a few of the available channels may be shown at any particular time.

A guide page providing information on the EPG is typically provided as an option for display with the EPG. The guide page can provide information and/or instructions relating to the user/broadcaster defined formats. The formats can be selected from this guide page if required. The format of the actual guide page can be divided as per the Figures described above, such that in each

section or box of the grid, a different format option can be displayed to be selected by a user. The user can also select whether to use a broadcaster defined format or a user-selected format.

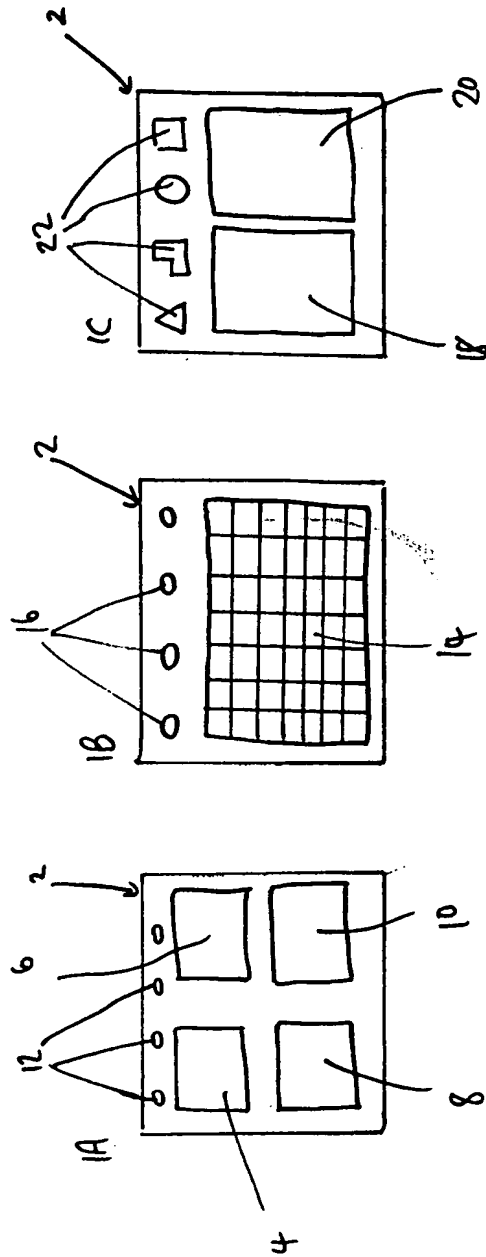
The EPG, when displayed on the display screen, can be provided with a drop down menu to enable a user to quickly and easily select a particular format, such as font size or font type, whilst still viewing the EPG. Furthermore, the user can input threshold values such that only quantities of program and channel information between these threshold values will be displayed at any one time. This threshold value option can be provided in the drop down menu, guide page and/or format option page.

In addition to having customised EPG display formats, the control buttons on the television set, remote control and/or other devices which operate with the television system can be customised to enable user's suffering from certain disabilities, such as colour blindness or poor sight to operate the controls relating to the EPG. For example, the control buttons can be shaped and coloured such that a user can recognise a particular shaped key with a particular function of the EPG. The user can be provided with the option of providing coloured buttons, shaped buttons or a combination of coloured and shaped buttons in the guide page or on screen menu. The button shapes of can include square, triangular, circular, diamond shaped buttons and/or other shapes.

In a further embodiment of the invention, instead of displaying the EPG in a conventional format where all "types of programs", "subtypes of programs", "event lists" and other similar program and channel information is displayed in a single screen, an EPG format can be provided where only a single menu is displayed at one time. Selection of an item from this single menu results in display of the next appropriate menu and so on. For example, the user could select

the item "Movies" from the "types" menu, then "Action" from the "subtype" menu and then select the title of an actual film from the "events list" menu. The selections made by the user can be displayed at the top of the display screen (i.e., movies/action/film title), thereby avoiding separate screens relating to each menu appearing on the display screen.

It can be seen from the above description that the present invention provides a means of customising a display for an EPG on a television system.



Figures 1A-1C